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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/716,811	11/18/2003	Munesato Kumagai	275412001800	8041
25226	7590	02/10/2006	EXAMINER	
MORRISON & FOERSTER LLP 755 PAGE MILL RD PALO ALTO, CA 94304-1018			ROSASCO, STEPHEN D	
			ART UNIT	PAPER NUMBER
			1756	
DATE MAILED: 02/10/2006				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/716,811

Applicant(s)

KUMAGAI, MUNESATO

Examiner

Stephen Rosasco

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 November 2005.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
4a) Of the above claim(s) 1-3 and 10-18 is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 4-9 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 18 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 12/19/03
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____

Detailed Action

Applicant's election without traverse of Group II (claims 4-9) in the reply filed on 11/21/05 is acknowledged.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyamae (6,866,969) in view of Matsushita (JP10-10308).

The claimed invention is directed to a method for producing a hologram element, employing a photomask which comprises a plurality of mask regions for forming the diffraction gratings of the respective regions of the hologram, the mask regions being composed of a non-light-transmitting mask portion and a light-transmitting portion, wherein, of the plurality of mask regions, at least two mask regions are configured differently from each other in arrangement interval at which the light-transmitting portions are arranged in an alignment direction, and in ratio of an alignment-direction-wise width for the light-transmitting portions to the alignment-direction-wise arrangement interval for the light-transmitting portions.

And wherein the ratio of the alignment-direction-wise width to the alignment-direction-wise arrangement interval for the light-transmitting portions in a mask region having a shorter light-transmitting-portion arrangement interval is made smaller than the ratio of the alignment-direction-wise width to the alignment-direction-wise arrangement interval for the light-transmitting portions in a mask region having a longer light-transmitting-portion arrangement interval.

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Miyamae teaches a photomask that has a transparent substrate (42), and a phase grating structured from a plurality of grooves of a fixed pitch (P) formed on said substrate, wherein at least either the depth or width of the respective grooves of the phase grating is made to bear the exposure pattern.

Miyamae also teaches a manufacturing method of a phase grating mask, comprising: an exposure step for forming on a resist a latent image of the phase grating mask containing a plurality of grooves in prescribed intervals; a development step for developing said resist and forming a phase grating resist; wherein said exposure step scans said resist and sets the depth of the exposure groove formed on said resist with the exposure beam in which the intensity thereof has been modulated in correspondence with the pattern of said phase grating mask; wherein at least either the depth or width of the respective grooves of said phase grating determines the 0 order optical transmittance of the exposed light that vertically crosses one face of said substrate; wherein the 0 order optical transmittance setting at said grooves forms the exposure pattern.

The teachings of Miyamae differ from those of the applicant in that the applicant teaches adjusting the diffraction efficiency of the first order diffracted light.

JP10-10308 teaches adjusting the diffraction efficiency of the first order diffracted light.

It would have been obvious to one having ordinary skill in the art to take the teachings of Miyamae and combine them with the teachings of JP10-10308 in order to make the claimed invention because the use and advantages of photolithography for adjusting the interval of closely spaced features is well known and it would have been obvious for one to take advantage of this technique.

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Conclusion

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Stephen Rosasco whose telephone number is (571) 272-1389. The Examiner can normally be reached Monday-Friday, from 8:00 AM to 4:30 PM. The Examiner's supervisor, Mark Huff, can be reached on (571) 272-1385. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'S. Rosasco', with a stylized, sweeping flourish extending from the end of the name.

S. Rosasco
Primary Examiner
Art Unit 1756

S. Rosasco
2/3/06